

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: HUBBARD POND	Lake Area (ha):	75.84
Town: RINDGE	Maximum depth (m):	4.9
County: Cheshire	Mean depth (m):	1.3
River Basin: Merrimack	Volume (m ³):	905000
Latitude: 42°46'10" N	Relative depth:	0.5
Longitude: 71°57'59" W	Shore configuration:	2.55
Elevation (ft): 1108	Areal water load (m/yr):	6.83
Shore length (m): 7600	Flushing rate (yr ⁻¹):	5.30
Watershed area (ha): 801.8	P retention coeff.:	0.60
% watershed ponded: 0.2	Lake type:	natural w/dam

BIOLOGICAL:

10 February 1999

2 September 1998

DOM. PHYTOPLANKTON (% TOTAL)	#1	NO WINTER PLANKTON	PERIDINIUM 90%
	#2	ANALYZED	MALLOMONAS 9%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			8.85
DOM. ZOOPLANKTON (% TOTAL)	#1		KELICOTTIA 29%
	#2		NAUPLIUS LARVA 25%
	#3		POLYARTHRA 15%
ROTIFERS/LITER			128
MICROCRUSTACEA/LITER			140
ZOOPLANKTON ABUNDANCE (#/L)			268
VASCULAR PLANT ABUNDANCE			Very abundant
SECCHI DISK TRANSPARENCY (m)			2.5
BOTTOM DISSOLVED OXYGEN (mg/L)		9.3	0.3
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : 78800

CHEMICAL:

Lake: HUBBARD POND

Town: RINDGE

	10 February 1999		2 September 1998		
DEPTH (m)	1.5	3.0	1.0		3.5
pH (units)	5.5	5.6	5.9		5.3
A.N.C. (Alkalinity)	1.2	1.5	1.1		1.8
NITRATE NITROGEN	0.07	0.40	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.40	0.40			
TOTAL PHOSPHORUS	0.009	0.010	0.013		0.026
CONDUCTIVITY (μ mhos/cm)	30.7	33.1	22.8		23.8
APPARENT COLOR (cpu)	49	47	50		90
MAGNESIUM			0.33		
CALCIUM			1.3		
SODIUM			2.2		
POTASSIUM			< 0.40		
CHLORIDE	3	3	3		2
SULFATE	5	4	3		3
TN : TP	52	80			
CALCITE SATURATION INDEX			5.2		

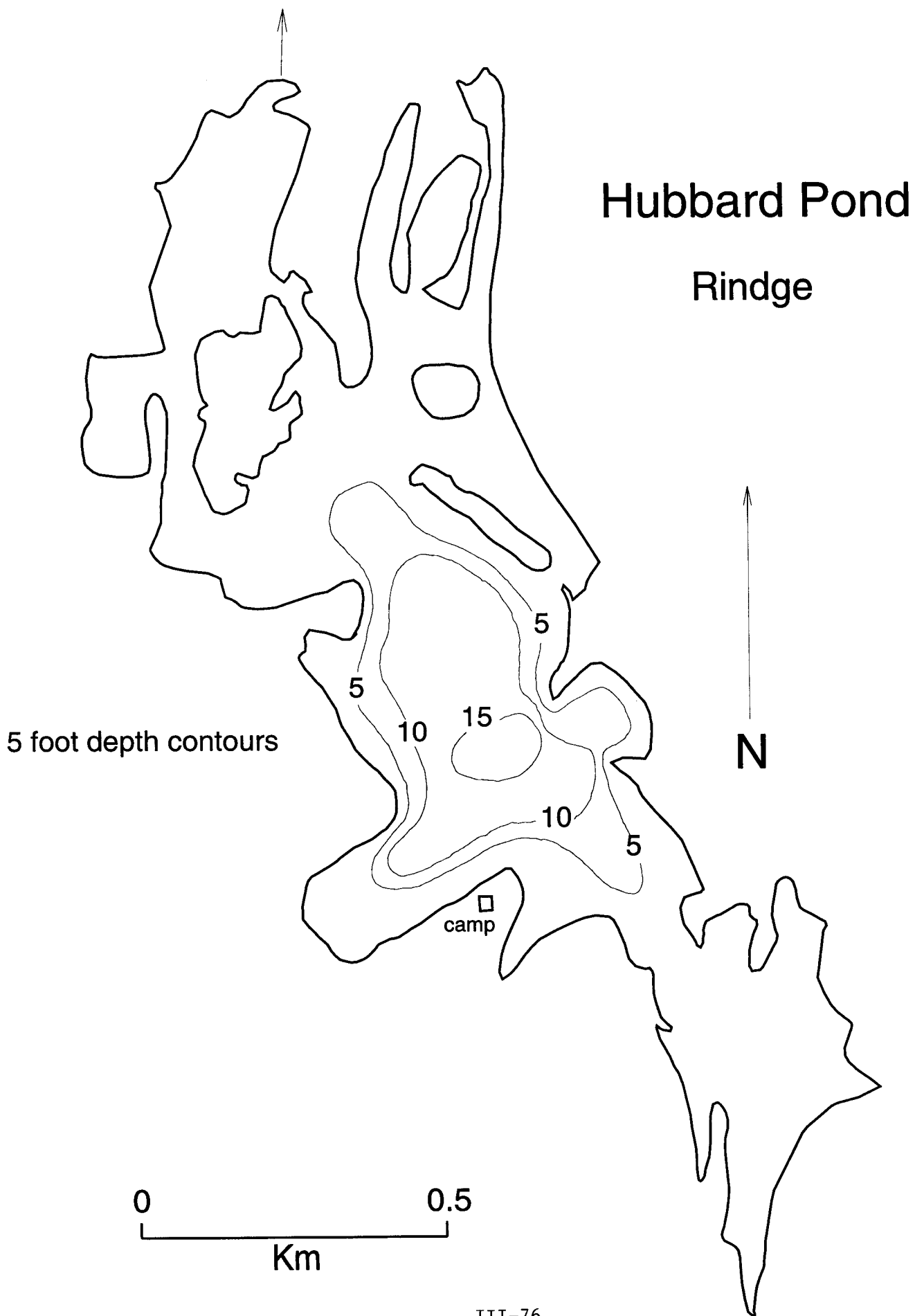
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	6	2	11	Eutro.

COMMENTS:

1. This pond was previously surveyed and classified in 1979. There was no change in trophic class and little change in trophic quality between the two dates.
2. Hubbard Pond is a moderately acidic, tea-colored eutrophic pond with very abundant rooted plant growth. Nutrient levels were not excessive.
3. This is essentially a small pond surrounded by shallow-water wetlands created by raising the water level by damming. It is naturally eutrophic, primarily because of the wetland plant growth.
4. There was only one seasonal juvenile camp and no other development on the pond.



FIELD DATA SHEET

LAKE: HUBBARD POND	TOWN: RINDGE
DATE: 09/02/1998	WEATHER: OVERCAST & BREEZY

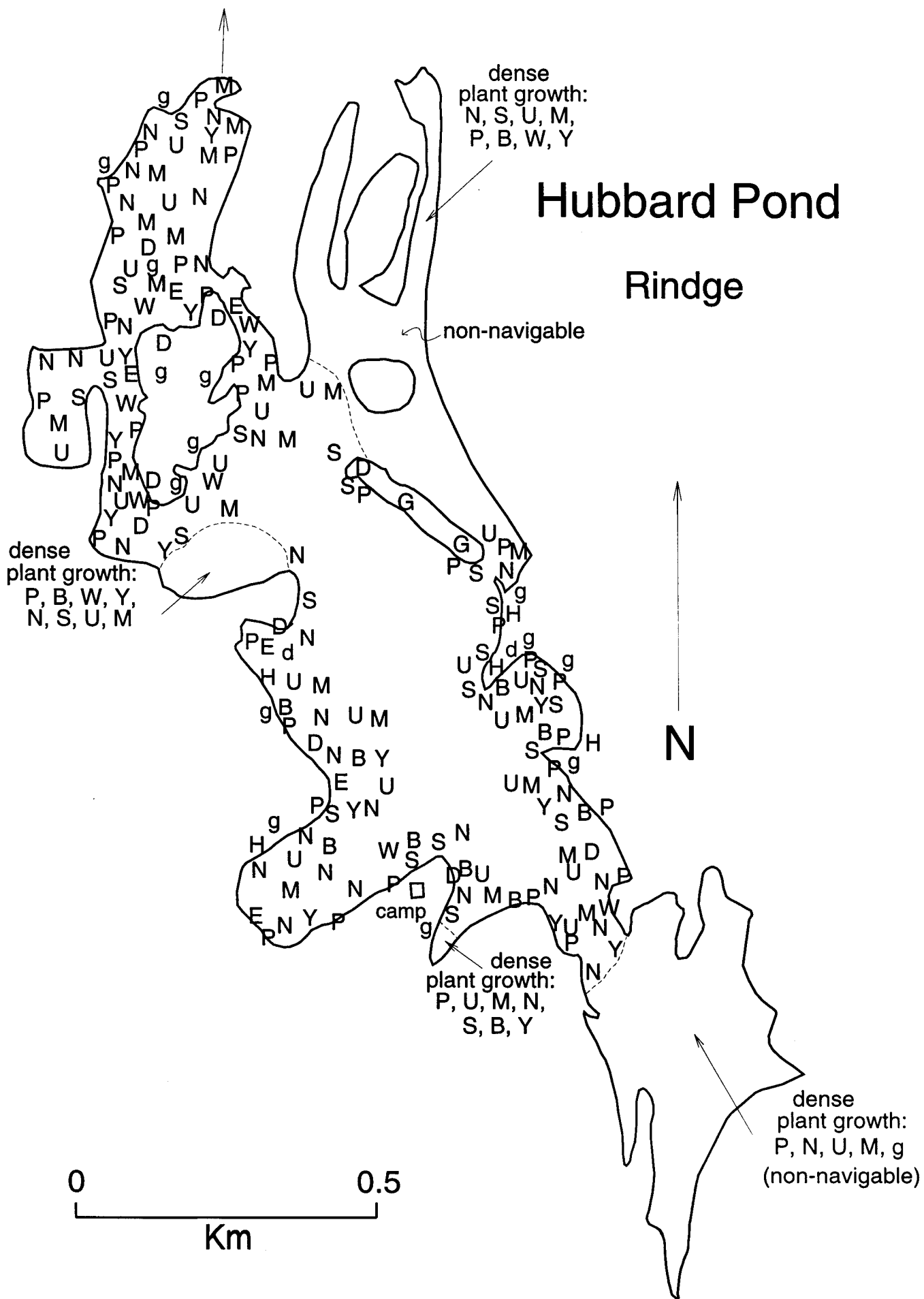
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TIME:	1130	
*Dissolved oxygen values are in mg/L		

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